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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/708,660 | 11/09/2000 | Werner Kluft | | 3155 |

7590 05/08/2003

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EXAMINER

NGUYEN, TU T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| | 2877 |

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/708,660

Applicant(s)

KLUFT, WERNER

Examiner

Tu T Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 4) Interview Summary (PTO-413) Paper No(s) ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

Detailed Office Action

Specification

The disclosure is objected to because of the following informalities:

In page 6, line 5, "a measuring cone 5" is not in the drawing.

Claim Objections

Claims 1-22 are objected to because of the following informalities:

- 1) Claim 1, lines 11-12, "the image field" and "the melting zone" lack of antecedent basis.
- 2) Claim 6, line 3, "the working direction" lacks of antecedent basis.
- 3) Claim 7, line 1, "the measuring data" lacks of antecedent basis.
- 4) Claim 11, line 1, "an optical sensor" should be changed to "the optical sensor".
- 5) Claim 14, line 2, "the scanned picture field" lacks of antecedent basis.
- 6) Claims 1-22, all the reference numbers in the claims should be deleted.

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1,6,14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) Claim 1, lines 3-8, The phrase “by measuring with the aid of an ... to an evaluation means” is not clear. It is not clear how the light intensity coaxially to the high energy radiation? What is the “light intensity”? Does applicant mean “the reflected light intensity from the vapour capillaries”? What does the phrase “an optical optical sensor (10) the light intensity” mean?

2) Claim 6, line 3, the word “and/or” is indefinite.

3) Regarding claim 14, line 2, the phrase "e.g." renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

4) Claim 14, lines 6-8, the phrase “the sensor (10) being working piece” is not clear. It is not clear how the sensor being focused coaxially to the direction of the high energy beam.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beyer et al

(5,869,805).

With respect to claims 1,11,14, Beyer discloses a method for measuring a material process using high energy beam. The method comprises: focusing a laser beam 12 (fig 1) into a working zone 13 (fig 1) of the workpiece 10 (fig 1), using an optical sensor 19 (fig 1) for measuring the light intensity, using an evaluation means (fig 5) for evaluating the condition.

Beyer does not disclose an optical sensor having a dynamic range of more than 70 dB. However, it would have been a design choice to modify Beyer's sensor with different dynamic range for measuring different material.

With respect to claims 2,7,13,15,17, Beyer discloses measuring the vapour capillaries by examining the cross section (abstract) of the picture. Beyer does not explicitly disclose dividing the picture into sections and examining the picture sections. However, the artisan would have been motivated to modify Beyer's method to divide the picture into sections and examine the picture by sections to save time or to reduce the amount of measuring data.

With respect to claims 3-6,8,12,19-20,22, it would have been obvious a design choice to modify Beyer's method to measure different area of the melting zone or using different wavelenghts of the beam path for different purposes.

With respect to claims 9,16, using CMOS camera as an optical sensor would ahve been known. It would ahve been obvious to modify Beyer's system with the known CMOS camera to make the system easier to setup.

With respect to claims 10,18,21, since Beyer performs the same function as the claimed invention, Beyer inherently discloses the claimed limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on M-T 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Tu T. Nguyen
Primary Examiner
Group Art Unit 2877
5/3/03